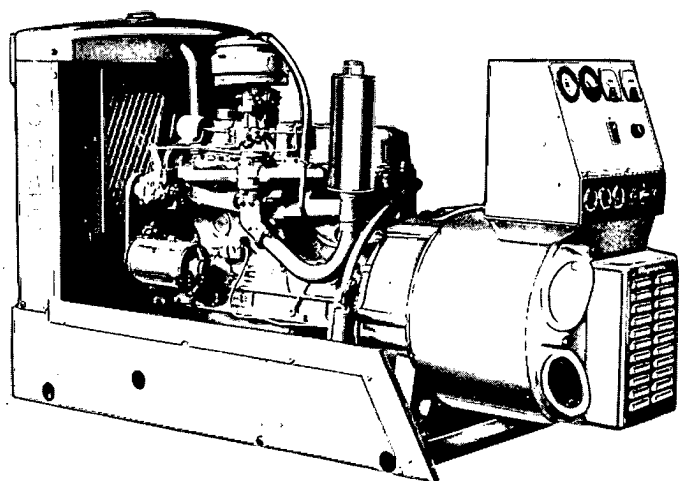


SERIES EC



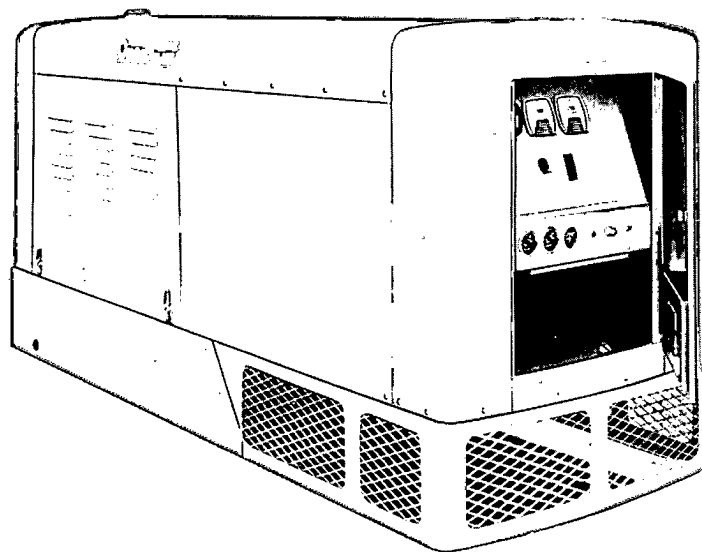
ELECTRIC GENERATING PLANTS GASOLINE - DRIVEN

25/30 KW WATER-COOLED

**PERFORMANCE
CERTIFIED**


UNHOUSED MODELS—Typical Model shown except for control accessories. See listing under Standard Controls

DOC	REV DATE	BY
ORIG COMP	056 OPI	56 TYPE
ORIG CLASS	M PAGES	3 REV CLASS
JUST	NEXT REV	AUTH: HR 10-2



HOUSED MODELS—Typical standard model.

ONAN built engine-alternator sets are complete, compact, single-unit electric power plants, designed for heavy-duty service. All units give maximum operating economy and dependability for primary or emergency standby power in any practical mobile or stationary application.

ONAN ALTERNATOR

- Rated for Continuous, Heavy-Duty Service
- ONAN Magneciter Controlled Alternator
- Static Excited and Voltage Regulated
- No Moving Parts in Regulator or Exciter
- Stable Alternator Operation for All Loads
- Exceptional Motor Starting Ability
- Amortisseur Windings for Parallel Operation and Allow Greater Load Unbalance
- Radio Suppression Exceeds Requirements for Most Commercial Applications
- All-Climate Insulation; Drip-Proof Design
- Directly-Connected to Engine to Assure Permanent Self Alignment

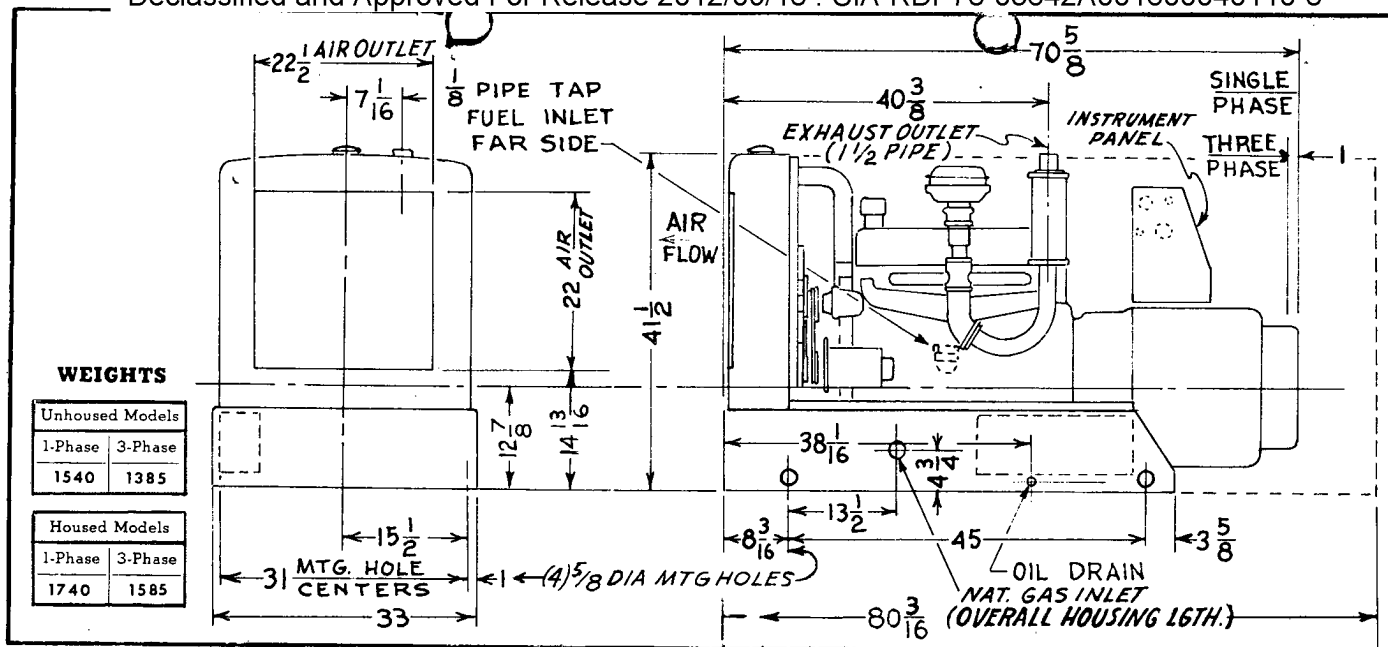
GASOLINE ENGINE

- Built for Continuous Heavy-Duty Service
- Ford 6-Cylinder, Industrial Engine
- Modified to Meet ONAN Specifications
- Hi-Compression, Short-Stroke, Low-Friction
- Positive Lubrication to All Moving Parts
- Efficient Cooling, Self-Sealing Water Pump
- Adjustable, Mechanical Governor
- Protective Shut-Down Devices
- Easy, Dependable Starting; Quiet Running

STANDARD CONTROLS

Unhoused Models: Manual Reset Circuit Breaker ◦ A.C. Voltmeter ◦ Voltage Adjusting Rheostat ◦ Battery Charge Rate Ammeter ◦ Oil Pressure Gauge ◦ Water Temperature Gauge ◦ High-Water Temperature Cut-Off ◦ Automatic Over-Speed Shut-Down ◦ 3-Wire Remote Start-Stop Control ◦ Ignition Switch

Housed Models: Same as Unhoused Models—Plus ◦ Ammeter and Phase Selector Switch for 3-Phase or Two Ammeters and no Selector Switch 1-Phase ◦ Current Transformers ◦ Running Time Meter ◦ 12-Volt Panel Light



GASOLINE ENGINE

Type: Overhead valve; 4-cycle; vertical, 6-cylinder; 3.62" bore; 3.6" stroke; 223-cu. in. piston displacement; 8.3:1 compression ratio. BMEP at rated generator load 130-psi. At 1800 rpm—1080-fpm piston speed, 69-hp. Ford 223.

Battery Charging Generator: Belt-driven; automatic 3-unit regulator; 12-volt, 30 amp. output.

Cooling System: Water-cooled; 20-qt.; thermostat control; radiator; belt-driven pusher type fan; cooling air volume 6500-cfm; electric water temperature gauge; high water temperature cut-off. Heat rejection 2640 BTU/MIN. Water pump capacity 34 GAL/MIN.

Fuel System: Downdraft carburetor; oil bath air cleaner; automatic choke; diaphragm type fuel pump with integral fuel filter; solenoid operated throttle shut-off; consumes 3.5-gph of gasoline at continuous rating; fuel lift 6-ft.

Governor: Belt-driven; mechanical; factory adjusted for 60 or 50 cycle. Overspeed engine-stop-switch. 5% frequency regulation.

Ignition: Battery, 12-volt. 18mm spark plugs.

Lubrication: Gear-driven oil pump; positive full pressure lubrication to all bearings; full-flow oil filter; pressure relief valve; electric oil pressure gauge; oil level gauge; wet sump; 6-qt.

Starting: Remote; 12-volt; positive shift gear-engaging starter. Use with LT Onan Line Transfer Control.

OTHER STANDARD EQUIPMENT

All Models: Battery rack mounted on the chassis, battery cables, muffler, exhaust tubing, vibration mounts.

Housed Models Only: A rugged weather protective housing fabricated of heavy-gauge sheet steel.

ONAN ALTERNATOR

Type: Revolving field, 4-pole. Magneciter controlled alternator. Excellent electric motor starting ability.

Alternator: Coupled to engine by semi-flexible steel drive disc. Permanently aligned. Amortisseur windings allow greater load unbalance and paralleling.

Bearing: Outboard end of alternator shaft carried in a large double sealed, prelubricated ball-bearing.

Exciter and Voltage Regulator: STATIC exciter and voltage regulator (no moving parts) are combined into one complete unit, mounted on alternator. Plus or minus 2% voltage regulation from no load to full load at continuous rating. When applying full load at rated power factor, the instantaneous voltage dip will not exceed 20% of rated voltage. Stable alternator operating conditions are established within 2 seconds following any sudden change in load. Rheostat for voltage adjustment —plus or minus 5%.

Insulation: Wire class A, ASA, and NEMA standards.

Temperature Rise: 50°C per NEMA MGI-11.08 at continuous rating.

Radio Suppression: Radio suppression exceeds requirements for most commercial applications.

OPTIONAL ACCESSORIES

Cooling: City-water cooling, water-cooled manifold. Radiator air discharge adapter.

Controls: LT Automatic Line Transfer Controls; additional instruments for unhoused models. Special controls.

Fuel: Mounted or underground fuel tanks with fittings; fuel lines; Day tank; combination gas/gaso carburetors.

Exhaust: Special mufflers; seamless exhaust tubing.

Starting: Batteries (one 12-volt, 72 amp. hr. battery required); remote start-stop station and wire.

MODEL SELECTION

ELECTRICAL DETAILS				MODEL		RATING			
						CONTINUOUS		STANDBY	
VOLTS	PHASE	WIRE	CYCLE	UNHOUSED	HOUSED	KW	KVA @ 0.8 PF	KW	KVA @ 0.8 PF
120/240	1	3	60	30EC-3R8	30EC-3R	25	31.25	30	37.50
120/208	3	4	60	30EC-4R8	30EC-4R	25	31.25	30	37.50
120/240*	3	4	60	30EC-5DR8	30EC-5DR	25	31.25	30	37.50
480	3	3	60	30EC-6R8	30EC-6R	25	31.25	30	37.50
220/380	3	4	60	30EC-7R8	30EC-7R	25	31.25	30	37.50
600	3	3	60	30EC-9R8	30EC-9R	25	31.25	30	37.50
277/480	3	4	60	30EC-4XR8	30EC-4XR	25	31.25	30	37.50

50 cycle models are available in the same voltages but derate to 20-kw continuous and 25-kw standby.

*This model only is Delta-wound with one phase center tapped to deliver a limited amount of 1-phase power.

Derate 4% for each 1000-ft. of altitude above sea level.

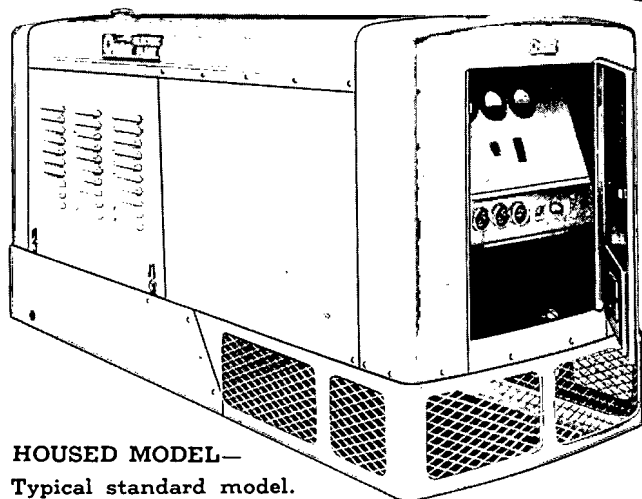


ELECTRIC GENERATING PLANTS GASOLINE - DRIVEN

DUAL PHASE PLANTS

1- and 3-Phase

WATER COOLED

**PERFORMANCE
CERTIFIED**


HOUSED MODEL—
Typical standard model.

Standard ONAN 10HQ, 15HQ, 25EC, 40EF, 50KB, 60KB, and 85KR gasoline engine driven generating plants can be equipped to provide single-phase or three-phase, four-wire power. This is accomplished by the use of 5-lead generators and a special two-position switch. In one position, the plant will deliver 120/240-v, single-phase output; in the other position, 120/208-v, three-phase output. An indicator light shows in which position the switch has been placed. The Generator instruments will read correctly in either position.

COMBINATION: SINGLE—and THREE-PHASE ONAN PLANTS

- Capacities: 6-kw, Single-Phase to 85-kw 3-Phase
- Same Plant delivers either 1-or 3-phase output
- Two-position (single—or three-phase) switch
- All Housed or Unhoused Plants have Engine Instrument Panel
- Housed Units include Generator Meter Panel
- Ideal for All Telephone, Electric, and other Utilities for Change-Over or Standby Service

These Plants are variations of Standard ONAN plants as listed in the table and have all the features of the basic models plus this additional use. See and refer to basic specification and price sheets listed in the table. A basic housed plant is shown because it includes engine instruments as well as a generator meter panel, and are ideal for trailer mounting to provide the utmost in portability, required for this type service. Unhoused Plants can also be supplied. Trailers and all standard optional accessories are available for Housed or Unhoused Plants.

Combinations and Capacities

Select basic model according to combination of single and three-phase output needed

KW at 0.8 PF		Dollar Adder to Basic Plant	BASIC HOUSED PLANT						
Three-Phase 120/208-V	Single-Phase 120/240-V		Model Number	Price List	Spec. Sheet Number	Dimensions—Inches			
						Length	Width	Height	Weight
10	6	\$250	10HQ-4R	L-220	A-328	73¾	27	36⅞	1225
10	10	340	10HQ-3R	L-220	A-328	73¾	27	36⅞	1265
15	10	250	15HQ-4R	L-220	A-328	73¾	27	36⅞	1265
15	15	340	15HQ-3R	L-220	A-328	73¾	27	36⅞	1380
25	16.5	250	25EC-4R	L-225	A-382	80¼	33	41½	1585
25	25	340	25EC-3R	L-225	A-382	80¼	33	41½	1740
40	26.5	250	40EF-4R	L-227	A-491	80¼	33	41½	1825
40	40	340	40EF-3R	L-227	A-491	80¼	33	41½	2010
50	33.5	275	50KB-4R	L-231	A-489	95⅞	36⅞	52½	2480
50	50	365	50KB-3R	L-231	A-489	95⅞	36⅞	52½	2760
*60	*40	275	60KB-4R	L-231	A-489	95⅞	36⅞	52½	2680
*85	*57	275	85KR-4R	L-236	A-490	95⅞	36⅞	52½	3020

1. Above basic plants are Housed. Unhoused plants available and described in the same specification and price sheets. Same "Dollar Adder".
2. Standard accessories, including Trailers are available for both series.
3. Selection: SELECT plant having single-phase and three-phase output required. CHECK specifications for details of the basic plant and equipment furnished. CHECK price list for price of basic model. ADD "Dollar Adder" to the price of the basic plant selected. ADD any additional accessories including Trailer, required. *These are STANDBY ratings, all others are for CONTINUOUS service.

D. W. ONAN & SONS INC. MINNEAPOLIS 14, MINNESOTA